SEQUENCE LISTING

<110> JAPAN SCIENCE AND TECHNOLOGY CORPORATION

<120> Proteins with functions to regulate cell-migration and
cell-death

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<150> JP P2001-256910
<151> 2001-8-27

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<170> PatentIn Ver. 2.1

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aac ggg cat gtc tcc tgc ccc aag tcc tcc atc atc agc agt gat ggt   158
Asn Gly His Val Ser Cys Pro Lys Ser Ser Ile Ile Ser Ser Asp Gly
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Gly Lys Gly Pro Ser Glu Asp Ala Lys Lys Asn Lys Ala Asn Arg Lys
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Glu Glu Asp Val Met Ala Ser Gly Thr Ile Lys Arg His Leu Lys Pro
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Ser Gly Glu Ser Glu Lys Lys Thr Lys Lys Ser Val Glu Leu Ser Lys
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gag gac ctc atc cag ctc ctg agt atc atg gaa ggg gag ttg cag gct    350
Glu Asp Leu Ile Gln Leu Leu Ser Ile Met Glu Gly Glu Leu Gln Ala
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cga gaa gat gtc atc cac atg ctg agg aca gag aaa acc aag ccc gag    398
Arg Glu Asp Val Ile His Met Leu Arg Thr Glu Lys Thr Lys Pro Glu
                 95             100             105

gtt ctg gag gca cac tat gga tct gca gaa cct gag aaa gtg ctt cgg    446
Val Leu Glu Ala His Tyr Gly Ser Ala Glu Pro Glu Lys Val Leu Arg
        110             115             120

gtc ctg cac cga gat gcc atc ctt gct caa gag aag tcc ata gga gaa    494
Val Leu His Arg Asp Ala Ile Leu Ala Gln Glu Lys Ser Ile Gly Glu
125             130             135             140

gac gtc tat gag aaa cct atc tca gag ctg gac aga ctg gag gaa aag    542
Asp Val Tyr Glu Lys Pro Ile Ser Glu Leu Asp Arg Leu Glu Glu Lys
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cag aag gag acg tac cgc cgc atg cta gag cag ctg ctg ctg gct gag    590
Gln Lys Glu Thr Tyr Arg Arg Met Leu Glu Gln Leu Leu Leu Ala Glu
                160             165             170

aag tgt cac agg cgc acc gtg tac gag ctg gag aac gag aag cac aag    638
Lys Cys His Arg Arg Thr Val Tyr Glu Leu Glu Asn Glu Lys His Lys
        175             180             185

cac act gac tac atg aac aag agc gac gac ttc acc aac ctg ctg gag    686
His Thr Asp Tyr Met Asn Lys Ser Asp Asp Phe Thr Asn Leu Leu Glu
        190             195             200

cag gag cga gag agg ttg aaa aag ctc ctt gaa caa gaa aaa gct tac    734
Gln Glu Arg Glu Arg Leu Lys Lys Leu Leu Glu Gln Glu Lys Ala Tyr
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gat gag ctt gtg aag ctc aag tcc ttc gcc ctc atg ttg gtg gac gag   830
Asp Glu Leu Val Lys Leu Lys Ser Phe Ala Leu Met Leu Val Asp Glu
              240             245             250

agg cag atg cac atc gag caa ctg ggc ctg cag agt cag aaa gtc cag   878
Arg Gln Met His Ile Glu Gln Leu Gly Leu Gln Ser Gln Lys Val Gln
              255             260             265

gac ctc act cag aag ctg agg gag gag gaa gaa aaa ctc aaa gcg gtc   926
Asp Leu Thr Gln Lys Leu Arg Glu Glu Glu Glu Lys Leu Lys Ala Val
              270             275             280

act tac aaa tcc aag gaa gac cgc cag aag ctg ctc aag tta gaa gtg   974
Thr Tyr Lys Ser Lys Glu Asp Arg Gln Lys Leu Leu Lys Leu Glu Val
285             290             295             300

gac ttc gaa cac aag gcc tcg agg ttt tcc cag gag cac gaa gag atg   1022
Asp Phe Glu His Lys Ala Ser Arg Phe Ser Gln Glu His Glu Glu Met
              305             310             315

aac gcc aaa ttg gcg aat caa gaa tct cac aac cgg caa ctt cga ctc   1070
Asn Ala Lys Leu Ala Asn Gln Glu Ser His Asn Arg Gln Leu Arg Leu
              320             325             330

aaa ctg gtt ggc tta tcg caa agg att gag gag ctg gaa gag acc aat   1118
Lys Leu Val Gly Leu Ser Gln Arg Ile Glu Glu Leu Glu Glu Thr Asn
              335             340             345

aaa agc ctt cag aag gca gag gaa gag ctc cag gag ctg aga gag aaa   1166
Lys Ser Leu Gln Lys Ala Glu Glu Glu Leu Gln Glu Leu Arg Glu Lys
              350             355             360

att gcc aaa ggg gaa tgt gga aac tcc agt ctc atg gcg gaa gtg gag   1214
Ile Ala Lys Gly Glu Cys Gly Asn Ser Ser Leu Met Ala Glu Val Glu
365             370             375             380

agt ctg cgc aag cgc gtg ctt gag atg gag ggc aag gat gaa gag atc   1262
Ser Leu Arg Lys Arg Val Leu Glu Met Glu Gly Lys Asp Glu Glu Ile
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acg aag acc gag gcc cag tgc cgg gag ctg aag aag aag ctc caa gag   1310
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gaa gaa cac cac agc aag gaa ctt aga cta gaa gtg gag aag ctg cag   1358
Glu Glu His His Ser Lys Glu Leu Arg Leu Glu Val Glu Lys Leu Gln
         415             420             425


aag agg atg tct gag ctg gag aag ctg gag gaa gcg ttc agc cgg agt   1406
Lys Arg Met Ser Glu Leu Glu Lys Leu Glu Glu Ala Phe Ser Arg Ser
     430             435             440


aag tcg gaa tgc acc cag ctc cat ctg aac ctg gag aag gag aag aac   1454
Lys Ser Glu Cys Thr Gln Leu His Leu Asn Leu Glu Lys Glu Lys Asn
445             450             455             460


cta acc aaa gac ctg ctg aac gag ctg gag gtg gtc aag agt cga gtt   1502
Leu Thr Lys Asp Leu Leu Asn Glu Leu Glu Val Val Lys Ser Arg Val
             465             470             475


aaa gaa ctc gaa tgc tcc gag agt aga ctg gag aag gcc gag tta agc   1550
Lys Glu Leu Glu Cys Ser Glu Ser Arg Leu Glu Lys Ala Glu Leu Ser
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ctc aaa gat gac ctt aca aag ctg aag tcc ttc act gtg atg ctg gtg   1598
Leu Lys Asp Asp Leu Thr Lys Leu Lys Ser Phe Thr Val Met Leu Val
         495             500             505


gat gag agg aaa aat atg atg gag aaa ata aag caa gaa gag agg aaa   1646
Asp Glu Arg Lys Asn Met Met Glu Lys Ile Lys Gln Glu Glu Arg Lys
         510             515             520


gtg gat ggg ttg aat aaa aac ttt aag gtg gag cag gga aaa gtc atg   1694
Val Asp Gly Leu Asn Lys Asn Phe Lys Val Glu Gln Gly Lys Val Met
525             530             535             540


gat gtg acg gaa aag cta atc gag gaa agc aag aag ctt tta aaa ctc   1742
Asp Val Thr Glu Lys Leu Ile Glu Glu Ser Lys Lys Leu Leu Lys Leu
             545             550             555


aaa tct gaa atg gag gaa aag gag tac agt ctg aca aag gag agg gat   1790
Lys Ser Glu Met Glu Glu Lys Glu Tyr Ser Leu Thr Lys Glu Arg Asp
             560             565             570


gag ctg atg ggt aaa ctg agg agc gaa gaa gaa agg tcc tgt gaa ctg   1838
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        Glu Leu Met Gly Lys Leu Arg Ser Glu Glu Glu Arg Ser Cys Glu Leu
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        agc tgc agt gta gac tta cta aag aag cgg ctt gat ggc ata gag gag    1886
        Ser Cys Ser Val Asp Leu Leu Lys Lys Arg Leu Asp Gly Ile Glu Glu
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        gta gaa agg gaa ata aac cga ggt agg tcg tgc aag ggg tct gag ttc    1934
        Val Glu Arg Glu Ile Asn Arg Gly Arg Ser Cys Lys Gly Ser Glu Phe
        605                 610                 615                 620

        acc tgc ccg gaa gac aat aag atc aga gaa cta acg ctt gaa atc gag    1982
        Thr Cys Pro Glu Asp Asn Lys Ile Arg Glu Leu Thr Leu Glu Ile Glu
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        aga ctg aag aaa cgg ctc cag cag ttg gag gtg gtg gag ggg gac ttg    2030
        Arg Leu Lys Lys Arg Leu Gln Gln Leu Glu Val Val Glu Gly Asp Leu
                 640                 645                 650

        atg aag acc gag gac gaa tat gac cag ttg gag cag aag ttc aga acc    2078
        Met Lys Thr Glu Asp Glu Tyr Asp Gln Leu Glu Gln Lys Phe Arg Thr
                 655                 660                 665

        gag cag gat aag gca aac ttc ctc tcc cag cag ctc gag gaa atc aaa    2126
        Glu Gln Asp Lys Ala Asn Phe Leu Ser Gln Gln Leu Glu Glu Ile Lys
                 670                 675                 680

        cac caa atg gcc aag cac aaa gcc ata gag aaa ggg gag gcc gtg agc    2174
        His Gln Met Ala Lys His Lys Ala Ile Glu Lys Gly Glu Ala Val Ser
        685                 690                 695                 700

        cag gaa gcc gaa ctg cga cac agg ttt cgg ctg gag gag gct aaa agt    2222
        Gln Glu Ala Glu Leu Arg His Arg Phe Arg Leu Glu Glu Ala Lys Ser
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        cgt gat tta cag gcc gag gtg cag gct ctc aag gag aag atc cac gag    2270
        Arg Asp Leu Gln Ala Glu Val Gln Ala Leu Lys Glu Lys Ile His Glu
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        ctg atg aac aag gaa gac cag ctg tct cag ctc caa gtc gac tat tcg    2318
        Leu Met Asn Lys Glu Asp Gln Leu Ser Gln Leu Gln Val Asp Tyr Ser
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        gtc ctt cag caa aga ttt atg gaa gaa gaa act aag aac aag aac atg    2366
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Val Leu Gln Gln Arg Phe Met Glu Glu Glu Thr Lys Asn Lys Asn Met
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ggg agg gag gtc ctc aat ctg acc aag gag cta gag ctt tcc aag cgc    2414
Gly Arg Glu Val Leu Asn Leu Thr Lys Glu Leu Glu Leu Ser Lys Arg
765                 770                 775                 780

tac agc cga gct ctc agg ccg agt ggg aac ggc cga agg atg gtg gac    2462
Tyr Ser Arg Ala Leu Arg Pro Ser Gly Asn Gly Arg Arg Met Val Asp
                785                 790                 795

gtg cct gtg gcc tcc act ggg gtg cag acc gag gcg gtg tgc ggg gat    2510
Val Pro Val Ala Ser Thr Gly Val Gln Thr Glu Ala Val Cys Gly Asp
                800                 805                 810

gct gcg gag gag gag acc ccg gct gtg ttc att cgc aaa tcc ttc cag    2558
Ala Ala Glu Glu Glu Thr Pro Ala Val Phe Ile Arg Lys Ser Phe Gln
            815                 820                 825

gag gaa aat cac atc atg agt aat ctt cga cag gta ggc ctg aag aaa    2606
Glu Glu Asn His Ile Met Ser Asn Leu Arg Gln Val Gly Leu Lys Lys
        830                 835                 840

ccc atg gaa cgg tcc tcg gtc ctc gac agg tat ccc cca gca gcg aat    2654
Pro Met Glu Arg Ser Ser Val Leu Asp Arg Tyr Pro Pro Ala Ala Asn
845                 850                 855                 860

gag ctc acc atg agg aag tct tgg att cct tgg atg aga aaa aga gaa    2702
Glu Leu Thr Met Arg Lys Ser Trp Ile Pro Trp Met Arg Lys Arg Glu
                865                 870                 875

aac ggt cct tcc act ccg cag gag aaa ggg ccc agg cca aac cag ggt    2750
Asn Gly Pro Ser Thr Pro Gln Glu Lys Gly Pro Arg Pro Asn Gln Gly
                880                 885                 890

gca ggg cac ccc ggg gag ctg gtc cta gca cca aag cag ggc cag ccc    2798
Ala Gly His Pro Gly Glu Leu Val Leu Ala Pro Lys Gln Gly Gln Pro
            895                 900                 905

cta cac atc cgt gtg aca cca gat cat gag aac agc act gcc acc ctg    2846
Leu His Ile Arg Val Thr Pro Asp His Glu Asn Ser Thr Ala Thr Leu
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gag atc aca agc ccc aca tct gaa gag ttt ttc tct agt acc acc gtc    2894
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Glu Ile Thr Ser Pro Thr Ser Glu Glu Phe Phe Ser Ser Thr Thr Val
925             930             935                 940


att cct acc tta ggc aac cag aaa cca aga ata acc att att cca tca          2942
Ile Pro Thr Leu Gly Asn Gln Lys Pro Arg Ile Thr Ile Ile Pro Ser
                945             950             955


ccc aat gtc atg tcg caa aag ccc aaa agt gca gat cct act ctc ggc          2990
Pro Asn Val Met Ser Gln Lys Pro Lys Ser Ala Asp Pro Thr Leu Gly
                960             965             970


cca gaa cga gcc atg tcc cct gtc acg att act act att tcc aga gag          3038
Pro Glu Arg Ala Met Ser Pro Val Thr Ile Thr Thr Ile Ser Arg Glu
                975             980             985


aag agc ccg gaa ggt gga agg agc gcc ttt gcc gac agg cct gca tcc          3086
Lys Ser Pro Glu Gly Gly Arg Ser Ala Phe Ala Asp Arg Pro Ala Ser
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ccc atc caa atc atg acg gtg tca aca tct gca gct ccc act gaa atc          3134
Pro Ile Gln Ile Met Thr Val Ser Thr Ser Ala Ala Pro Thr Glu Ile
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gct gtc tct cct gaa tct cag gaa gtg cct atg gga agg act atc ctc          3182
Ala Val Ser Pro Glu Ser Gln Glu Val Pro Met Gly Arg Thr Ile Leu
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aaa gtc acc ccg gaa aaa caa act gtt cca gcc ccc gtg cgg aag tac          3230
Lys Val Thr Pro Glu Lys Gln Thr Val Pro Ala Pro Val Arg Lys Tyr
            1040            1045            1050


aac tcc aat gct aat atc atc acc acg gaa gac aat aaa att cac att          3278
Asn Ser Asn Ala Asn Ile Ile Thr Thr Glu Asp Asn Lys Ile His Ile
        1055            1060            1065


cac ctg ggt tct cag ttt aag cga tct cct ggg cct gcc gct gaa ggc          3326
His Leu Gly Ser Gln Phe Lys Arg Ser Pro Gly Pro Ala Ala Glu Gly
    1070            1075            1080


gtg agc cca gtt atc acc gtc cgg cct gtc aac gtg aca gcg gag aag          3374
Val Ser Pro Val Ile Thr Val Arg Pro Val Asn Val Thr Ala Glu Lys
1085            1090            1095            1100


gag gtt tct aca ggc aca gtc ctt cgc tct ccc agg aac cac ctc tct          3422
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Glu Val Ser Thr Gly Thr Val Leu Arg Ser Pro Arg Asn His Leu Ser
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tca aga ccc ggt gct agc aaa gtg acc agc act ata act ata acc ccg   3470
Ser Arg Pro Gly Ala Ser Lys Val Thr Ser Thr Ile Thr Ile Thr Pro
             1120   1125   1130

gtc aca acg tca tcc aca cga gga acc caa tca gtg tca gga caa gat   3518
Val Thr Thr Ser Ser Thr Arg Gly Thr Gln Ser Val Ser Gly Gln Asp
        1135   1140   1145

ggg tca tct cag cgg cct acc ccc acc cgc att cct atg tca aaa ggt   3566
Gly Ser Ser Gln Arg Pro Thr Pro Thr Arg Ile Pro Met Ser Lys Gly
     1150   1155   1160

atg aaa gct gga aag cca gta gtg gca gcc tca gga gca gga aat ctg   3614
Met Lys Ala Gly Lys Pro Val Val Ala Ala Ser Gly Ala Gly Asn Leu
1165   1170   1175   1180

acc aaa ttc cag cct cga gct gag act cag tct atg aaa ata gag ctg   3662
Thr Lys Phe Gln Pro Arg Ala Glu Thr Gln Ser Met Lys Ile Glu Leu
             1185   1190   1195

aag aaa tct gca gcc agc agc act gcc tct ctt gga ggg ggg aag ggc   3710
Lys Lys Ser Ala Ala Ser Ser Thr Ala Ser Leu Gly Gly Gly Lys Gly
             1200   1205   1210

tgagggcagt ggctaagggg gtatgttgta aggatgctac tgctgcagtg gaaacaaacc   3770

ttcctctgtg ccaacccttt ccttgtacta ctaatttaag ttttaaatat cttgtttata   3830

aaataaccat ttaatagcca tgcacccccc tcccattttg tgcatctgtt tcaatgcagg   3890

ggaatagaat taattagcag aatttctgtt tgctgaatgt tctgttgaag atgttggtcc   3950

agttcagttt tacttctagc atgtggcccc attcaaggta gctcacgagt tgtgaagccc   4010

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            20   25   30

Ser Glu Asp Ala Lys Lys Asn Lys Ala Asn Arg Lys Glu Glu Asp Val
        35   40   45

Met Ala Ser Gly Thr Ile Lys Arg His Leu Lys Pro Ser Gly Glu Ser
     50   55   60

Glu Lys Lys Thr Lys Lys Ser Val Glu Leu Ser Lys Glu Asp Leu Ile
 65   70   75   80

Gln Leu Leu Ser Ile Met Glu Gly Glu Leu Gln Ala Arg Glu Asp Val
                85   90   95

Ile His Met Leu Arg Thr Glu Lys Thr Lys Pro Glu Val Leu Glu Ala
            100   105   110

His Tyr Gly Ser Ala Glu Pro Glu Lys Val Leu Arg Val Leu His Arg
            115   120   125

Asp Ala Ile Leu Ala Gln Glu Lys Ser Ile Gly Glu Asp Val Tyr Glu
    130   135   140

Lys Pro Ile Ser Glu Leu Asp Arg Leu Glu Glu Lys Gln Lys Glu Thr
145   150   155   160

Tyr Arg Arg Met Leu Glu Gln Leu Leu Leu Ala Glu Lys Cys His Arg
                165   170   175

Arg Thr Val Tyr Glu Leu Glu Asn Glu Lys His Lys His Thr Asp Tyr
        180   185   190

Met Asn Lys Ser Asp Asp Phe Thr Asn Leu Leu Glu Gln Glu Arg Glu
        195   200   205

Arg Leu Lys Lys Leu Leu Glu Gln Glu Lys Ala Tyr Gln Ala Arg Lys
     210   215   220

Glu Lys Glu Asn Ala Lys Arg Leu Asn Lys Leu Arg Asp Glu Leu Val
225   230   235   240

Lys Leu Lys Ser Phe Ala Leu Met Leu Val Asp Glu Arg Gln Met His
             245   250   255

Ile Glu Gln Leu Gly Leu Gln Ser Gln Lys Val Gln Asp Leu Thr Gln
        260   265   270

Lys Leu Arg Glu Glu Glu Glu Lys Leu Lys Ala Val Thr Tyr Lys Ser
        275   280   285

Lys Glu Asp Arg Gln Lys Leu Leu Lys Leu Glu Val Asp Phe Glu His
     290   295   300

Lys Ala Ser Arg Phe Ser Gln Glu His Glu Glu Met Asn Ala Lys Leu
305   310   315   320

Ala Asn Gln Glu Ser His Asn Arg Gln Leu Arg Leu Lys Leu Val Gly
             325   330   335

Leu Ser Gln Arg Ile Glu Glu Leu Glu Glu Thr Asn Lys Ser Leu Gln
        340   345   350

Lys Ala Glu Glu Glu Leu Gln Glu Leu Arg Glu Lys Ile Ala Lys Gly
        355   360   365

Glu Cys Gly Asn Ser Ser Leu Met Ala Glu Val Glu Ser Leu Arg Lys
     370   375   380

Arg Val Leu Glu Met Glu Gly Lys Asp Glu Glu Ile Thr Lys Thr Glu
385   390   395   400

Ala Gln Cys Arg Glu Leu Lys Lys Lys Leu Gln Glu Glu Glu His His

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    Ser Lys Glu Leu Arg Leu Glu Val Glu Lys Leu Gln Lys Arg Met Ser
                420                     425                     430

    Glu Leu Glu Lys Leu Glu Glu Ala Phe Ser Arg Ser Lys Ser Glu Cys
                435                     440                     445

    Thr Gln Leu His Leu Asn Leu Glu Lys Glu Lys Asn Leu Thr Lys Asp
        450                     455                     460

    Leu Leu Asn Glu Leu Glu Val Val Lys Ser Arg Val Lys Glu Leu Glu
    465                     470                     475                     480

    Cys Ser Glu Ser Arg Leu Glu Lys Ala Glu Leu Ser Leu Lys Asp Asp
                    485                     490                     495

    Leu Thr Lys Leu Lys Ser Phe Thr Val Met Leu Val Asp Glu Arg Lys
                500                     505                     510

    Asn Met Met Glu Lys Ile Lys Gln Glu Glu Arg Lys Val Asp Gly Leu
                515                     520                     525

    Asn Lys Asn Phe Lys Val Glu Gln Gly Lys Val Met Asp Val Thr Glu
                530                     535                     540

    Lys Leu Ile Glu Glu Ser Lys Lys Leu Leu Lys Leu Lys Ser Glu Met
    545                     550                     555                     560

    Glu Glu Lys Glu Tyr Ser Leu Thr Lys Glu Arg Asp Glu Leu Met Gly
                    565                     570                     575

    Lys Leu Arg Ser Glu Glu Glu Arg Ser Cys Glu Leu Ser Cys Ser Val
                580                     585                     590

    Asp Leu Leu Lys Lys Arg Leu Asp Gly Ile Glu Glu Val Glu Arg Glu
                595                     600                     605

    Ile Asn Arg Gly Arg Ser Cys Lys Gly Ser Glu Phe Thr Cys Pro Glu
        610                     615                     620

    Asp Asn Lys Ile Arg Glu Leu Thr Leu Glu Ile Glu Arg Leu Lys Lys
    625                     630                     635                     640
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Arg Leu Gln Gln Leu Glu Val Val Glu Gly Asp Leu Met Lys Thr Glu
              645   650   655

Asp Glu Tyr Asp Gln Leu Glu Gln Lys Phe Arg Thr Glu Gln Asp Lys
              660   665   670

Ala Asn Phe Leu Ser Gln Gln Leu Glu Glu Ile Lys His Gln Met Ala
              675   680   685

Lys His Lys Ala Ile Glu Lys Gly Glu Ala Val Ser Gln Glu Ala Glu
          690   695   700

Leu Arg His Arg Phe Arg Leu Glu Glu Ala Lys Ser Arg Asp Leu Gln
705   710   715   720

Ala Glu Val Gln Ala Leu Lys Glu Lys Ile His Glu Leu Met Asn Lys
              725   730   735

Glu Asp Gln Leu Ser Gln Leu Gln Val Asp Tyr Ser Val Leu Gln Gln
              740   745   750

Arg Phe Met Glu Glu Glu Thr Lys Asn Lys Asn Met Gly Arg Glu Val
              755   760   765

Leu Asn Leu Thr Lys Glu Leu Glu Leu Ser Lys Arg Tyr Ser Arg Ala
          770   775   780

Leu Arg Pro Ser Gly Asn Gly Arg Arg Met Val Asp Val Pro Val Ala
785   790   795   800

Ser Thr Gly Val Gln Thr Glu Ala Val Cys Gly Asp Ala Ala Glu Glu
              805   810   815

Glu Thr Pro Ala Val Phe Ile Arg Lys Ser Phe Gln Glu Glu Asn His
              820   825   830

Ile Met Ser Asn Leu Arg Gln Val Gly Leu Lys Lys Pro Met Glu Arg
              835   840   845

Ser Ser Val Leu Asp Arg Tyr Pro Pro Ala Ala Asn Glu Leu Thr Met
          850   855   860

Arg Lys Ser Trp Ile Pro Trp Met Arg Lys Arg Glu Asn Gly Pro Ser
865   870   875   880

Thr Pro Gln Glu Lys Gly Pro Arg Pro Asn Gln Gly Ala Gly His Pro
                885   890   895

Gly Glu Leu Val Leu Ala Pro Lys Gln Gly Gln Pro Leu His Ile Arg
            900   905   910

Val Thr Pro Asp His Glu Asn Ser Thr Ala Thr Leu Glu Ile Thr Ser
        915   920   925

Pro Thr Ser Glu Glu Phe Phe Ser Ser Thr Thr Val Ile Pro Thr Leu
    930   935   940

Gly Asn Gln Lys Pro Arg Ile Thr Ile Ile Pro Ser Pro Asn Val Met
945   950   955   960

Ser Gln Lys Pro Lys Ser Ala Asp Pro Thr Leu Gly Pro Glu Arg Ala
            965   970   975

Met Ser Pro Val Thr Ile Thr Thr Ile Ser Arg Glu Lys Ser Pro Glu
            980   985   990

Gly Gly Arg Ser Ala Phe Ala Asp Arg Pro Ala Ser Pro Ile Gln Ile
        995   1000   1005

Met Thr Val Ser Thr Ser Ala Ala Pro Thr Glu Ile Ala Val Ser Pro
    1010   1015   1020

Glu Ser Gln Glu Val Pro Met Gly Arg Thr Ile Leu Lys Val Thr Pro
1025   1030   1035   1040

Glu Lys Gln Thr Val Pro Ala Pro Val Arg Lys Tyr Asn Ser Asn Ala
            1045   1050   1055

Asn Ile Ile Thr Thr Glu Asp Asn Lys Ile His Ile His Leu Gly Ser
        1060   1065   1070

Gln Phe Lys Arg Ser Pro Gly Pro Ala Ala Glu Gly Val Ser Pro Val
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Ile Thr Val Arg Pro Val Asn Val Thr Ala Glu Lys Glu Val Ser Thr
    1090   1095   1100

Gly Thr Val Leu Arg Ser Pro Arg Asn His Leu Ser Ser Arg Pro Gly

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  Ala Ser Lys Val Thr Ser Thr Ile Thr Ile Thr Pro Val Thr Thr Ser
            1125                 1130                1135

  Ser Thr Arg Gly Thr Gln Ser Val Ser Gly Gln Asp Gly Ser Ser Gln
            1140                 1145                1150

  Arg Pro Thr Pro Thr Arg Ile Pro Met Ser Lys Gly Met Lys Ala Gly
            1155                 1160                1165

  Lys Pro Val Val Ala Ala Ser Gly Ala Gly Asn Leu Thr Lys Phe Gln
            1170                 1175                1180

  Pro Arg Ala Glu Thr Gln Ser Met Lys Ile Glu Leu Lys Lys Ser Ala
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  Ala Ser Ser Thr Ala Ser Leu Gly Gly Gly Lys Gly
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ggttgaaaaa gctccttgaa caagaaaaag cttaccaagc ccgcaaagaa aaggaaaacg   180

ctaagcggct caacaaactt cgagatgagc ttgtgaagct caagtccttc gccctc atg   239
                                                              Met
                                                                1

ttg gtg gac gag agg cag atg cac atc gag caa ctg ggc ctg cag agt   287
Leu Val Asp Glu Arg Gln Met His Ile Glu Gln Leu Gly Leu Gln Ser
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cag aaa gtc cag gac ctc act cag aag ctg agg gag gag gaa gaa aaa   335
Gln Lys Val Gln Asp Leu Thr Gln Lys Leu Arg Glu Glu Glu Glu Lys
            20   25   30

ctc aaa gcg gtc act tac aaa tcc aag gaa gac cgc cag aag ctg ctc   383
Leu Lys Ala Val Thr Tyr Lys Ser Lys Glu Asp Arg Gln Lys Leu Leu
        35   40   45

aag tta gaa gtg gac ttc gaa cac aag gcc tcg agg ttt tcc cag gag   431
Lys Leu Glu Val Asp Phe Glu His Lys Ala Ser Arg Phe Ser Gln Glu
50   55   60   65

cac gaa gag atg aac gcc aaa ttg gcg aat caa gaa tct cac aac cgg   479
His Glu Glu Met Asn Ala Lys Leu Ala Asn Gln Glu Ser His Asn Arg
                70   75   80

caa ctt cga ctc aaa ctg gtt ggc tta tcg caa agg att gag gag ctg   527
Gln Leu Arg Leu Lys Leu Val Gly Leu Ser Gln Arg Ile Glu Glu Leu
            85   90   95

gaa gag acc aat aaa agc ctt cag aag gca gag gaa gag ctc cag gag   575
Glu Glu Thr Asn Lys Ser Leu Gln Lys Ala Glu Glu Glu Leu Gln Glu
            100   105   110

ctg aga gag aaa att gcc aaa ggg gaa tgt gga aac tcc agt ctc atg   623
Leu Arg Glu Lys Ile Ala Lys Gly Glu Cys Gly Asn Ser Ser Leu Met
        115   120   125

gcg gaa gtg gag agt ctg cgc aag cgc gtg ctt gag atg gag ggc aag   671
Ala Glu Val Glu Ser Leu Arg Lys Arg Val Leu Glu Met Glu Gly Lys
130   135   140   145

gat gaa gag atc acg aag acc gag gcc cag tgc cgg gag ctg aag aag   719
Asp Glu Glu Ile Thr Lys Thr Glu Ala Gln Cys Arg Glu Leu Lys Lys
                150   155   160

aag ctc caa gag gaa gaa cac cac agc aag gaa ctt aga cta gaa gtg   767
Lys Leu Gln Glu Glu Glu His His Ser Lys Glu Leu Arg Leu Glu Val
                165   170   175

gag aag ctg cag aag agg atg tct gag ctg gag aag ctg gag gaa gcg   815
Glu Lys Leu Gln Lys Arg Met Ser Glu Leu Glu Lys Leu Glu Glu Ala

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                 180                    185                    190

ttc agc cgg agt aag tcg gaa tgc acc cag ctc cat ctg aac ctg gag    863
Phe Ser Arg Ser Lys Ser Glu Cys Thr Gln Leu His Leu Asn Leu Glu
    195                    200                    205

aag gag aag aac cta acc aaa gac ctg ctg aac gag ctg gag gtg gtc    911
Lys Glu Lys Asn Leu Thr Lys Asp Leu Leu Asn Glu Leu Glu Val Val
210                    215                    220                    225

aag agt cga gtt aaa gaa ctc gaa tgc tcc gag agt aga ctg gag aag    959
Lys Ser Arg Val Lys Glu Leu Glu Cys Ser Glu Ser Arg Leu Glu Lys
                   230                    235                    240

gcc gag tta agc ctc aaa gat gac ctt aca aag ctg aag tcc ttc act   1007
Ala Glu Leu Ser Leu Lys Asp Asp Leu Thr Lys Leu Lys Ser Phe Thr
                   245                    250                    255

gtg atg ctg gtg gat gag agg aaa aat atg atg gag aaa ata aag caa   1055
Val Met Leu Val Asp Glu Arg Lys Asn Met Met Glu Lys Ile Lys Gln
                   260                    265                    270

gaa gag agg aaa gtg gat ggg ttg aat aaa aac ttt aag gtg gag cag   1103
Glu Glu Arg Lys Val Asp Gly Leu Asn Lys Asn Phe Lys Val Glu Gln
    275                    280                    285

gga aaa gtc atg gat gtg acg gaa aag cta atc gag gaa agc aag aag   1151
Gly Lys Val Met Asp Val Thr Glu Lys Leu Ile Glu Glu Ser Lys Lys
290                    295                    300                    305

ctt tta aaa ctc aaa tct gaa atg gag gaa aag gag tac agt ctg aca   1199
Leu Leu Lys Leu Lys Ser Glu Met Glu Glu Lys Glu Tyr Ser Leu Thr
                   310                    315                    320

aag gag agg gat gag ctg atg ggt aaa ctg agg agc gaa gaa gaa agg   1247
Lys Glu Arg Asp Glu Leu Met Gly Lys Leu Arg Ser Glu Glu Glu Arg
                   325                    330                    335

tcc tgt gaa ctg agc tgc agt gta gac tta cta aag aag cgg ctt gat   1295
Ser Cys Glu Leu Ser Cys Ser Val Asp Leu Leu Lys Lys Arg Leu Asp
                   340                    345                    350

ggc ata gag gag gta gaa agg gaa ata aac cga ggt agg tcg tgc aag   1343
Gly Ile Glu Glu Val Glu Arg Glu Ile Asn Arg Gly Arg Ser Cys Lys
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            355                  360                  365

ggg tct gag ttc acc tgc ccg gaa gac aat aag atc aga gaa cta acg    1391
Gly Ser Glu Phe Thr Cys Pro Glu Asp Asn Lys Ile Arg Glu Leu Thr
370                  375                  380                  385

ctt gaa atc gag aga ctg aag aaa cgg ctc cag cag ttg gag gtg gtg    1439
Leu Glu Ile Glu Arg Leu Lys Lys Arg Leu Gln Gln Leu Glu Val Val
                    390                  395                  400

gag ggg gac ttg atg aag acc gag gac gaa tat gac cag ttg gag cag    1487
Glu Gly Asp Leu Met Lys Thr Glu Asp Glu Tyr Asp Gln Leu Glu Gln
                405                  410                  415

aag ttc aga acc gag cag gat aag gca aac ttc ctc tcc cag cag ctc    1535
Lys Phe Arg Thr Glu Gln Asp Lys Ala Asn Phe Leu Ser Gln Gln Leu
            420                  425                  430

gag gaa atc aaa cac caa atg gcc aag cac aaa gcc ata gag aaa ggg    1583
Glu Glu Ile Lys His Gln Met Ala Lys His Lys Ala Ile Glu Lys Gly
        435                  440                  445

gag gcc gtg agc cag gaa gcc gaa ctg cga cac agg ttt cgg ctg gag    1631
Glu Ala Val Ser Gln Glu Ala Glu Leu Arg His Arg Phe Arg Leu Glu
450                  455                  460                  465

gag gct aaa agt cgt gat tta cag gcc gag gtg cag gct ctc aag gag    1679
Glu Ala Lys Ser Arg Asp Leu Gln Ala Glu Val Gln Ala Leu Lys Glu
                470                  475                  480

aag atc cac gag ctg atg aac aag gaa gac cag ctg tct cag ctc caa    1727
Lys Ile His Glu Leu Met Asn Lys Glu Asp Gln Leu Ser Gln Leu Gln
            485                  490                  495

gtc gac tat tcg gtc ctt cag caa aga ttt atg gaa gaa gaa act aag    1775
Val Asp Tyr Ser Val Leu Gln Gln Arg Phe Met Glu Glu Glu Thr Lys
            500                  505                  510

aac aag aac atg ggg agg gag gtc ctc aat ctg acc aag gag cta gag    1823
Asn Lys Asn Met Gly Arg Glu Val Leu Asn Leu Thr Lys Glu Leu Glu
            515                  520                  525

ctt tcc aag cgc tac agc cga gct ctc agg ccg agt ggg aac ggc cga    1871
Leu Ser Lys Arg Tyr Ser Arg Ala Leu Arg Pro Ser Gly Asn Gly Arg
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		530			535			540			545				

agg atg gtg gac gtg cct gtg gcc tcc act ggg gtg cag acc gag gcg   1919
Arg Met Val Asp Val Pro Val Ala Ser Thr Gly Val Gln Thr Glu Ala
            550   555   560

gtg tgc ggg gat gct gcg gag gag gag acc ccg gct gtg ttc att cgc   1967
Val Cys Gly Asp Ala Ala Glu Glu Glu Thr Pro Ala Val Phe Ile Arg
            565   570   575

aaa tcc ttc cag gag gaa aat cac atc atg agt aat ctt cga cag gta   2015
Lys Ser Phe Gln Glu Glu Asn His Ile Met Ser Asn Leu Arg Gln Val
            580   585   590

ggc ctg aag aaa ccc atg gaa cgg tcc tcg gtc ctc gac agg tat ccc   2063
Gly Leu Lys Lys Pro Met Glu Arg Ser Ser Val Leu Asp Arg Tyr Pro
        595   600   605

cca gca gcg aat gag ctc acc atg agg aag tct tgg att cct tgg atg   2111
Pro Ala Ala Asn Glu Leu Thr Met Arg Lys Ser Trp Ile Pro Trp Met
610   615   620   625

aga aaa aga gaa aac ggt cct tcc act ccg cag gag aaa ggg ccc agg   2159
Arg Lys Arg Glu Asn Gly Pro Ser Thr Pro Gln Glu Lys Gly Pro Arg
                630   635   640

cca aac cag ggt gca ggg cac ccc ggg gag ctg gtc cta gca cca aag   2207
Pro Asn Gln Gly Ala Gly His Pro Gly Glu Leu Val Leu Ala Pro Lys
            645   650   655

cag ggc cag ccc cta cac atc cgt gtg aca cca gat cat gag aac agc   2255
Gln Gly Gln Pro Leu His Ile Arg Val Thr Pro Asp His Glu Asn Ser
        660   665   670

act gcc acc ctg gag atc aca agc ccc aca tct gaa gag ttt ttc tct   2303
Thr Ala Thr Leu Glu Ile Thr Ser Pro Thr Ser Glu Glu Phe Phe Ser
        675   680   685

agt acc acc gtc att cct acc tta ggc aac cag aaa cca aga ata acc   2351
Ser Thr Thr Val Ile Pro Thr Leu Gly Asn Gln Lys Pro Arg Ile Thr
690   695   700   705

att att cca tca ccc aat gtc atg tcg caa aag ccc aaa agt gca gat   2399
Ile Ile Pro Ser Pro Asn Val Met Ser Gln Lys Pro Lys Ser Ala Asp

710   715   720

cct act ctc ggc cca gaa cga gcc atg tcc cct gtc acg att act act   2447
Pro Thr Leu Gly Pro Glu Arg Ala Met Ser Pro Val Thr Ile Thr Thr
            725   730   735

att tcc aga gag aag agc ccg gaa ggt gga agg agc gcc ttt gcc gac   2495
Ile Ser Arg Glu Lys Ser Pro Glu Gly Gly Arg Ser Ala Phe Ala Asp
            740   745   750

agg cct gca tcc ccc atc caa atc atg acg gtg tca aca tct gca gct   2543
Arg Pro Ala Ser Pro Ile Gln Ile Met Thr Val Ser Thr Ser Ala Ala
            755   760   765

ccc act gaa atc gct gtc tct cct gaa tct cag gaa gtg cct atg gga   2591
Pro Thr Glu Ile Ala Val Ser Pro Glu Ser Gln Glu Val Pro Met Gly
770   775   780   785

agg act atc ctc aaa gtc acc ccg gaa aaa caa act gtt cca gcc ccc   2639
Arg Thr Ile Leu Lys Val Thr Pro Glu Lys Gln Thr Val Pro Ala Pro
            790   795   800

gtg cgg aag tac aac tcc aat gct aat atc atc acc acg gaa gac aat   2687
Val Arg Lys Tyr Asn Ser Asn Ala Asn Ile Ile Thr Thr Glu Asp Asn
            805   810   815

aaa att cac att cac ctg ggt tct cag ttt aag cga tct cct ggg cct   2735
Lys Ile His Ile His Leu Gly Ser Gln Phe Lys Arg Ser Pro Gly Pro
            820   825   830

gcc gct gaa ggc gtg agc cca gtt atc acc gtc cgg cct gtc aac gtg   2783
Ala Ala Glu Gly Val Ser Pro Val Ile Thr Val Arg Pro Val Asn Val
            835   840   845

aca gcg gag aag gag gtt tct aca ggc aca gtc ctt cgc tct ccc agg   2831
Thr Ala Glu Lys Glu Val Ser Thr Gly Thr Val Leu Arg Ser Pro Arg
850   855   860   865

aac cac ctc tct tca aga ccc ggt gct agc aaa gtg acc agc act ata   2879
Asn His Leu Ser Ser Arg Pro Gly Ala Ser Lys Val Thr Ser Thr Ile
            870   875   880

act ata acc ccg gtc aca acg tca tcc aca cga gga acc caa tca gtg   2927
Thr Ile Thr Pro Val Thr Thr Ser Ser Thr Arg Gly Thr Gln Ser Val

tca gga caa gat ggg tca tct cag cgg cct acc ccc acc cgc att cct   2975
Ser Gly Gln Asp Gly Ser Ser Gln Arg Pro Thr Pro Thr Arg Ile Pro
        900   905   910

atg tca aaa ggt atg aaa gct gga aag cca gta gtg gca gcc tca gga   3023
Met Ser Lys Gly Met Lys Ala Gly Lys Pro Val Val Ala Ala Ser Gly
        915   920   925

gca gga aat ctg acc aaa ttc cag cct cga gct gag act cag tct atg   3071
Ala Gly Asn Leu Thr Lys Phe Gln Pro Arg Ala Glu Thr Gln Ser Met
930   935   940   945

aaa ata gag ctg aag aaa tct gca gcc agc agc act gcc tct ctt gga   3119
Lys Ile Glu Leu Lys Lys Ser Ala Ala Ser Ser Thr Ala Ser Leu Gly
            950   955   960

ggg ggg aag ggc tgagggcagt ggctaagggg gtatgttgta aggatgctac   3171
Gly Gly Lys Gly
            965

tgctgcagtg gaaacaaacc ttcctctgtg ccaacccttt ccttgtacta ctaatttaag 3231

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tgcatctgtt tcaatgcagg ggaatagaat taattagcag aatttctgtt tgctgaatgt 3351

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gctcacgagt tgtgaagccc tcaatatcgt caccggagag atttgaggac cacattacat 3471

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tctgtgattt tttttccaa aaaaaaaata ttttgaaata ggacagagtt taacagttgt 3591

catttgcac tatcaagcca tgagtttgat atatgggtta taagaaaaga atactttcag 3651

agctatcaca gggtctctaa actttttggaa aaacaaaagc ccctaatatg acctcaggaa 3711

acaatttgaa catgaaataa aatggaaatg aactgtggaa tcttaaaaaa aaaaaaaaaa 3771

aaaaaaaaaa aaaa   3785

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Lys Leu Lys Ala Val Thr Tyr Lys Ser Lys Glu Asp Arg Gln Lys Leu
        35   40   45

Leu Lys Leu Glu Val Asp Phe Glu His Lys Ala Ser Arg Phe Ser Gln
    50   55   60

Glu His Glu Glu Met Asn Ala Lys Leu Ala Asn Gln Glu Ser His Asn
65   70   75   80

Arg Gln Leu Arg Leu Lys Leu Val Gly Leu Ser Gln Arg Ile Glu Glu
                85   90   95

Leu Glu Glu Thr Asn Lys Ser Leu Gln Lys Ala Glu Glu Glu Leu Gln
            100   105   110

Glu Leu Arg Glu Lys Ile Ala Lys Gly Glu Cys Gly Asn Ser Ser Leu
            115   120   125

Met Ala Glu Val Glu Ser Leu Arg Lys Arg Val Leu Glu Met Glu Gly
    130   135   140

Lys Asp Glu Glu Ile Thr Lys Thr Glu Ala Gln Cys Arg Glu Leu Lys
145   150   155   160

Lys Lys Leu Gln Glu Glu Glu His His Ser Lys Glu Leu Arg Leu Glu
                165   170   175

Val Glu Lys Leu Gln Lys Arg Met Ser Glu Leu Glu Lys Leu Glu Glu
            180   185   190

Ala Phe Ser Arg Ser Lys Ser Glu Cys Thr Gln Leu His Leu Asn Leu

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                195                     200                     205

Glu Lys Glu Lys Asn Leu Thr Lys Asp Leu Leu Asn Glu Leu Glu Val
    210                 215                 220

Val Lys Ser Arg Val Lys Glu Leu Glu Cys Ser Glu Ser Arg Leu Glu
225                 230                 235                 240

Lys Ala Glu Leu Ser Leu Lys Asp Asp Leu Thr Lys Leu Lys Ser Phe
                245                 250                 255

Thr Val Met Leu Val Asp Glu Arg Lys Asn Met Met Glu Lys Ile Lys
            260                 265                 270

Gln Glu Glu Arg Lys Val Asp Gly Leu Asn Lys Asn Phe Lys Val Glu
            275                 280                 285

Gln Gly Lys Val Met Asp Val Thr Glu Lys Leu Ile Glu Glu Ser Lys
    290                 295                 300

Lys Leu Leu Lys Leu Lys Ser Glu Met Glu Glu Lys Glu Tyr Ser Leu
305                 310                 315                 320

Thr Lys Glu Arg Asp Glu Leu Met Gly Lys Leu Arg Ser Glu Glu Glu
                325                 330                 335

Arg Ser Cys Glu Leu Ser Cys Ser Val Asp Leu Leu Lys Lys Arg Leu
            340                 345                 350

Asp Gly Ile Glu Glu Val Glu Arg Glu Ile Asn Arg Gly Arg Ser Cys
            355                 360                 365

Lys Gly Ser Glu Phe Thr Cys Pro Glu Asp Asn Lys Ile Arg Glu Leu
    370                 375                 380

Thr Leu Glu Ile Glu Arg Leu Lys Lys Arg Leu Gln Gln Leu Glu Val
385                 390                 395                 400

Val Glu Gly Asp Leu Met Lys Thr Glu Asp Glu Tyr Asp Gln Leu Glu
                405                 410                 415

Gln Lys Phe Arg Thr Glu Gln Asp Lys Ala Asn Phe Leu Ser Gln Gln
            420                 425                 430
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Leu Glu Glu Ile Lys His Gln Met Ala Lys His Lys Ala Ile Glu Lys
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Gly Glu Ala Val Ser Gln Glu Ala Glu Leu Arg His Arg Phe Arg Leu
        450                 455                 460

Glu Glu Ala Lys Ser Arg Asp Leu Gln Ala Glu Val Gln Ala Leu Lys
465                 470                 475                 480

Glu Lys Ile His Glu Leu Met Asn Lys Glu Asp Gln Leu Ser Gln Leu
                485                 490                 495

Gln Val Asp Tyr Ser Val Leu Gln Gln Arg Phe Met Glu Glu Glu Thr
                500                 505                 510

Lys Asn Lys Asn Met Gly Arg Glu Val Leu Asn Leu Thr Lys Glu Leu
        515                 520                 525

Glu Leu Ser Lys Arg Tyr Ser Arg Ala Leu Arg Pro Ser Gly Asn Gly
        530                 535                 540

Arg Arg Met Val Asp Val Pro Val Ala Ser Thr Gly Val Gln Thr Glu
545                 550                 555                 560

Ala Val Cys Gly Asp Ala Ala Glu Glu Glu Thr Pro Ala Val Phe Ile
                565                 570                 575

Arg Lys Ser Phe Gln Glu Glu Asn His Ile Met Ser Asn Leu Arg Gln
            580                 585                 590

Val Gly Leu Lys Lys Pro Met Glu Arg Ser Ser Val Leu Asp Arg Tyr
        595                 600                 605

Pro Pro Ala Ala Asn Glu Leu Thr Met Arg Lys Ser Trp Ile Pro Trp
        610                 615                 620

Met Arg Lys Arg Glu Asn Gly Pro Ser Thr Pro Gln Glu Lys Gly Pro
625                 630                 635                 640

Arg Pro Asn Gln Gly Ala Gly His Pro Gly Glu Leu Val Leu Ala Pro
                645                 650                 655

Lys Gln Gly Gln Pro Leu His Ile Arg Val Thr Pro Asp His Glu Asn
            660                 665                 670
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Ser Thr Ala Thr Leu Glu Ile Thr Ser Pro Thr Ser Glu Glu Phe Phe
        675   680   685

Ser Ser Thr Thr Val Ile Pro Thr Leu Gly Asn Gln Lys Pro Arg Ile
        690   695   700

Thr Ile Ile Pro Ser Pro Asn Val Met Ser Gln Lys Pro Lys Ser Ala
705   710   715   720

Asp Pro Thr Leu Gly Pro Glu Arg Ala Met Ser Pro Val Thr Ile Thr
                725   730   735

Thr Ile Ser Arg Glu Lys Ser Pro Glu Gly Gly Arg Ser Ala Phe Ala
            740   745   750

Asp Arg Pro Ala Ser Pro Ile Gln Ile Met Thr Val Ser Thr Ser Ala
        755   760   765

Ala Pro Thr Glu Ile Ala Val Ser Pro Glu Ser Gln Glu Val Pro Met
    770   775   780

Gly Arg Thr Ile Leu Lys Val Thr Pro Glu Lys Gln Thr Val Pro Ala
785   790   795   800

Pro Val Arg Lys Tyr Asn Ser Asn Ala Asn Ile Ile Thr Thr Glu Asp
                805   810   815

Asn Lys Ile His Ile His Leu Gly Ser Gln Phe Lys Arg Ser Pro Gly
            820   825   830

Pro Ala Ala Glu Gly Val Ser Pro Val Ile Thr Val Arg Pro Val Asn
        835   840   845

Val Thr Ala Glu Lys Glu Val Ser Thr Gly Thr Val Leu Arg Ser Pro
    850   855   860

Arg Asn His Leu Ser Ser Arg Pro Gly Ala Ser Lys Val Thr Ser Thr
865   870   875   880

Ile Thr Ile Thr Pro Val Thr Thr Ser Ser Thr Arg Gly Thr Gln Ser
                885   890   895

Val Ser Gly Gln Asp Gly Ser Ser Gln Arg Pro Thr Pro Thr Arg Ile

Pro Met Ser Lys Gly Met Lys Ala Gly Lys Pro Val Val Ala Ala Ser
        915   920   925

Gly Ala Gly Asn Leu Thr Lys Phe Gln Pro Arg Ala Glu Thr Gln Ser
    930   935   940

Met Lys Ile Glu Leu Lys Lys Ser Ala Ala Ser Ser Thr Ala Ser Leu
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Gly Gly Gly Lys Gly
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cat atc tcc tgt ccc aag ccc tcc atc atc ggc aat gct ggt gaa aaa   96
His Ile Ser Cys Pro Lys Pro Ser Ile Ile Gly Asn Ala Gly Glu Lys
 15   20   25   30

agt ctc tca gaa gat gca aaa aag aag aag aaa tca aat agg aag gag   144
Ser Leu Ser Glu Asp Ala Lys Lys Lys Lys Lys Ser Asn Arg Lys Glu
                35   40   45

gat gat gtc atg gcc tca gga act gtc aaa cga cac cta aaa aca tct   192
Asp Asp Val Met Ala Ser Gly Thr Val Lys Arg His Leu Lys Thr Ser
                50   55   60

gga gaa tgt gaa cga aaa act aag aaa tcc ctg gag tta tcc aaa gaa   240
Gly Glu Cys Glu Arg Lys Thr Lys Lys Ser Leu Glu Leu Ser Lys Glu
            65   70   75

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gac ctc atc caa cta ctc agt ata atg gaa ggg gag ttg cag gcc aga    288
Asp Leu Ile Gln Leu Leu Ser Ile Met Glu Gly Glu Leu Gln Ala Arg
     80                  85                  90

gaa gat gtg atc cac atg ctg aag aca gag aaa acc aag cct gag gtt    336
Glu Asp Val Ile His Met Leu Lys Thr Glu Lys Thr Lys Pro Glu Val
 95                 100                 105                 110

ctg gag gct cat tac ggg tct gcg gag cca gag aaa gtg ctg cgg gtc    384
Leu Glu Ala His Tyr Gly Ser Ala Glu Pro Glu Lys Val Leu Arg Val
                115                 120                 125

ctg cac cga gat gcc att ctt gcc cag gag aaa tcc ata gga gaa gat    432
Leu His Arg Asp Ala Ile Leu Ala Gln Glu Lys Ser Ile Gly Glu Asp
                130                 135                 140

gtc tat gag aaa ccg att tca gag ctg gac aga ctt gag gaa aaa cag    480
Val Tyr Glu Lys Pro Ile Ser Glu Leu Asp Arg Leu Glu Glu Lys Gln
                145                 150                 155

aaa gaa acc tac cgg cgc atg cta gag cag ctg ttg ctg gcc gag aag    528
Lys Glu Thr Tyr Arg Arg Met Leu Glu Gln Leu Leu Leu Ala Glu Lys
     160                 165                 170

tgt cat agg cgc acc gta tac gag tta gag aac gag aag cat aaa cac    576
Cys His Arg Arg Thr Val Tyr Glu Leu Glu Asn Glu Lys His Lys His
175                 180                 185                 190

act gac tac atg aac aag agc gac gac ttc acc aac ctg ctg gag cag    624
Thr Asp Tyr Met Asn Lys Ser Asp Asp Phe Thr Asn Leu Leu Glu Gln
                195                 200                 205

gag cgg gag agg tta aaa aag ctc ctt gaa caa gaa aag gct tat caa    672
Glu Arg Glu Arg Leu Lys Lys Leu Leu Glu Gln Glu Lys Ala Tyr Gln
                210                 215                 220

gcc cgc aaa gaa aag gaa aat gct aaa cga ctc aat aaa cta aga gat    720
Ala Arg Lys Glu Lys Glu Asn Ala Lys Arg Leu Asn Lys Leu Arg Asp
     225                 230                 235

gag ctt gtt aaa ctc aaa tcc ttt gca ctc atg ctg gtg gat gaa aga    768
Glu Leu Val Lys Leu Lys Ser Phe Ala Leu Met Leu Val Asp Glu Arg
     240                 245                 250
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caa atg cac att gaa caa ctt ggc ctg caa agc cag aaa gta cag gat     816
Gln Met His Ile Glu Gln Leu Gly Leu Gln Ser Gln Lys Val Gln Asp
255                 260                 265                 270

ctt act cag aag ctg agg gaa gaa gaa gag aag ctc aaa gcc att act     864
Leu Thr Gln Lys Leu Arg Glu Glu Glu Glu Lys Leu Lys Ala Ile Thr
                275                 280                 285

tcc aaa tcc aaa gaa gac aga cag aaa ttg ctc aag tta gaa gtg gac     912
Ser Lys Ser Lys Glu Asp Arg Gln Lys Leu Leu Lys Leu Glu Val Asp
                290                 295                 300

ttt gaa cac aag gct tcg agg ttt tct caa gag cat gaa gag atg aac     960
Phe Glu His Lys Ala Ser Arg Phe Ser Gln Glu His Glu Glu Met Asn
                305                 310                 315

gct aaa ctg gct aat caa gag tct cac aat agg caa ctt aga ctc aag    1008
Ala Lys Leu Ala Asn Gln Glu Ser His Asn Arg Gln Leu Arg Leu Lys
        320                 325                 330

ctg gtt ggc tta acc caa aga atc gag gag cta gaa gag acc aac aaa    1056
Leu Val Gly Leu Thr Gln Arg Ile Glu Glu Leu Glu Glu Thr Asn Lys
335                 340                 345                 350

aat ctg cag aag gca gag gaa gaa ctt caa gaa tta aga gat aaa att    1104
Asn Leu Gln Lys Ala Glu Glu Glu Leu Gln Glu Leu Arg Asp Lys Ile
                355                 360                 365

gcc aaa gga gaa tgt gga aac tct agc ctc atg gca gaa gtg gaa aat    1152
Ala Lys Gly Glu Cys Gly Asn Ser Ser Leu Met Ala Glu Val Glu Asn
                370                 375                 380

ctt cga aag cgt gtg ctt gaa atg gaa ggt aaa gat gag gag atc act    1200
Leu Arg Lys Arg Val Leu Glu Met Glu Gly Lys Asp Glu Glu Ile Thr
            385                 390                 395

aaa act gaa tcc cag tgt agg gaa ttg agg aag aag ctg caa gag gaa    1248
Lys Thr Glu Ser Gln Cys Arg Glu Leu Arg Lys Lys Leu Gln Glu Glu
        400                 405                 410

gaa cac cat agt aag gag ctc aga ctt gaa gtt gag aag cta cag aag    1296
Glu His His Ser Lys Glu Leu Arg Leu Glu Val Glu Lys Leu Gln Lys
415                 420                 425                 430
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aga atg tct gaa cta gag aaa ttg gaa gaa gca ttt agc aag agt aaa      1344
Arg Met Ser Glu Leu Glu Lys Leu Glu Glu Ala Phe Ser Lys Ser Lys
            435             440             445

tct gag tgc acc cag cta cat tta aat ctg gag aaa gaa aag aac tta      1392
Ser Glu Cys Thr Gln Leu His Leu Asn Leu Glu Lys Glu Lys Asn Leu
            450             455             460

acc aaa gac ctg cta aat gaa ttg gag gtg gtc aag agt cga gtt aaa      1440
Thr Lys Asp Leu Leu Asn Glu Leu Glu Val Val Lys Ser Arg Val Lys
            465             470             475

gaa ttg gaa tgt tct gaa agt aga ttg gaa aag gct gaa tta agc cta      1488
Glu Leu Glu Cys Ser Glu Ser Arg Leu Glu Lys Ala Glu Leu Ser Leu
        480             485             490

aaa gat gat ctt acc aag ttg aag tca ttt acc gtg atg ctg gtt gat      1536
Lys Asp Asp Leu Thr Lys Leu Lys Ser Phe Thr Val Met Leu Val Asp
495             500             505             510

gaa agg aaa aat atg atg gaa aaa ata aaa caa gaa gag aga aaa gtg      1584
Glu Arg Lys Asn Met Met Glu Lys Ile Lys Gln Glu Glu Arg Lys Val
                515             520             525

gat gga ctc aat aaa aat ttt aag gtg gaa caa gga aaa gtt atg gat      1632
Asp Gly Leu Asn Lys Asn Phe Lys Val Glu Gln Gly Lys Val Met Asp
            530             535             540

gta act gaa aaa cta att gaa gaa agt aag aaa ctt tta aaa cta aaa      1680
Val Thr Glu Lys Leu Ile Glu Glu Ser Lys Lys Leu Leu Lys Leu Lys
            545             550             555

tct gaa atg gag gaa aaa gta tac aac ttg aca aga gaa aga gat gag      1728
Ser Glu Met Glu Glu Lys Val Tyr Asn Leu Thr Arg Glu Arg Asp Glu
        560             565             570

ttg ata ggc aaa ttg aaa agt gaa gaa gaa aaa tcc tct gaa tta agc      1776
Leu Ile Gly Lys Leu Lys Ser Glu Glu Glu Lys Ser Ser Glu Leu Ser
575             580             585             590

tgc agt gtt gac tta cta aag aag aga ctt gat ggt ata gag gaa gtg      1824
Cys Ser Val Asp Leu Leu Lys Lys Arg Leu Asp Gly Ile Glu Glu Val
            595             600             605
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gaa aga gaa ata aca aga gga agg tca cga aaa ggg tct gag ctc acc        1872
Glu Arg Glu Ile Thr Arg Gly Arg Ser Arg Lys Gly Ser Glu Leu Thr
            610                 615              620

tgc ccg gaa gat aat aag att aag gaa cta aca ctt gaa att gag aga        1920
Cys Pro Glu Asp Asn Lys Ile Lys Glu Leu Thr Leu Glu Ile Glu Arg
        625                 630                 635

ctg aag aaa cgt ctc caa caa ttg gaa gtg gtc gaa ggg gat ttg atg        1968
Leu Lys Lys Arg Leu Gln Gln Leu Glu Val Val Glu Gly Asp Leu Met
        640                 645                 650

aag aca gaa gat gag tat gat cag ctg gaa cag aaa ttt aga act gag        2016
Lys Thr Glu Asp Glu Tyr Asp Gln Leu Glu Gln Lys Phe Arg Thr Glu
655                 660                 665                 670

cag gat aag gct aac ttc ctc tct caa caa cta gag gag atc aag cac        2064
Gln Asp Lys Ala Asn Phe Leu Ser Gln Gln Leu Glu Glu Ile Lys His
            675                 680                 685

caa att gcc aag aat aaa gca ata gag aag ggt gag gtt gtg agc cag        2112
Gln Ile Ala Lys Asn Lys Ala Ile Glu Lys Gly Glu Val Val Ser Gln
            690                 695                 700

gaa gct gaa ctg aga cac aga ttt cgg ttg gaa gaa gct aaa agt cga        2160
Glu Ala Glu Leu Arg His Arg Phe Arg Leu Glu Glu Ala Lys Ser Arg
        705                 710                 715

gac tta aaa gcc gaa gta caa gct ctt aaa gag aag att cac gaa tta        2208
Asp Leu Lys Ala Glu Val Gln Ala Leu Lys Glu Lys Ile His Glu Leu
        720                 725                 730

atg aac aaa gaa gat cag ctt tct cag ctc cag gta gat tat tct gta        2256
Met Asn Lys Glu Asp Gln Leu Ser Gln Leu Gln Val Asp Tyr Ser Val
735                 740                 745                 750

ctt caa caa aga ttt atg gaa gaa gaa aat aag aac aaa aac atg ggg        2304
Leu Gln Gln Arg Phe Met Glu Glu Glu Asn Lys Asn Lys Asn Met Gly
                755                 760                 765

cag gag gtt ctc aat ctg acc aaa gag ttg gag ctt tcc aag cgc tac        2352
Gln Glu Val Leu Asn Leu Thr Lys Glu Leu Glu Leu Ser Lys Arg Tyr
            770                 775                 780
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agc aga gct ctt agg ccc agt gtg aat gga aga aga atg gtg gat gtt    2400
Ser Arg Ala Leu Arg Pro Ser Val Asn Gly Arg Arg Met Val Asp Val
        785                 790                 795

cct gtg acg tca act gga gtc caa act gat gca gtc agc ggt gaa gca    2448
Pro Val Thr Ser Thr Gly Val Gln Thr Asp Ala Val Ser Gly Glu Ala
        800                 805                 810

gca gag gaa gaa acg cca gct gta ttc ata cgg aaa tcc ttc cag gaa    2496
Ala Glu Glu Glu Thr Pro Ala Val Phe Ile Arg Lys Ser Phe Gln Glu
815                 820                 825                 830

gaa aat cat att atg agt aat ctt cgg cag gtg gga ttg aag aaa ccc    2544
Glu Asn His Ile Met Ser Asn Leu Arg Gln Val Gly Leu Lys Lys Pro
                835                 840                 845

gtg gaa aga tct tct gtt cta gac agg tat cct cca gca gca aat gag    2592
Val Glu Arg Ser Ser Val Leu Asp Arg Tyr Pro Pro Ala Ala Asn Glu
                850                 855                 860

ctc act atg aga aag tct tgg att cca tgg atg aga aag agg gaa aac    2640
Leu Thr Met Arg Lys Ser Trp Ile Pro Trp Met Arg Lys Arg Glu Asn
                865                 870                 875

ggc ccc tcc atc act cag gag aaa ggg ccc cga aca aat tcc agt cca    2688
Gly Pro Ser Ile Thr Gln Glu Lys Gly Pro Arg Thr Asn Ser Ser Pro
        880                 885                 890

ggg cac cca gga gag gta gtc ctt tca cca aag cag ggc cag ccc ctg    2736
Gly His Pro Gly Glu Val Val Leu Ser Pro Lys Gln Gly Gln Pro Leu
895                 900                 905                 910

cat att cga gtg aca cca gac cac gag aac agc act gcg act ttg gag    2784
His Ile Arg Val Thr Pro Asp His Glu Asn Ser Thr Ala Thr Leu Glu
                915                 920                 925

ata aca agc ccg aca tct gaa gaa ttt ttt tct agt acc act gtc att    2832
Ile Thr Ser Pro Thr Ser Glu Glu Phe Phe Ser Ser Thr Thr Val Ile
                930                 935                 940

cct acc tta ggg aat cag aaa cca aga ata acc att att cca tca cca    2880
Pro Thr Leu Gly Asn Gln Lys Pro Arg Ile Thr Ile Ile Pro Ser Pro
                945                 950                 955
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aac gtt atg cct caa aaa caa aaa agt gga gat act act ctt ggc cca    2928
Asn Val Met Pro Gln Lys Gln Lys Ser Gly Asp Thr Thr Leu Gly Pro
    960             965             970

gaa cga gcc atg tcc cca gtc aca att act aca ttt tcc aga gag aag    2976
Glu Arg Ala Met Ser Pro Val Thr Ile Thr Thr Phe Ser Arg Glu Lys
975             980             985             990

act cca gaa agt gga aga ggc gca ttt gca gac agg ccc aca tcc cct    3024
Thr Pro Glu Ser Gly Arg Gly Ala Phe Ala Asp Arg Pro Thr Ser Pro
            995             1000            1005

att cag ata atg acg gtg tct aca tca gca gca cca gct gag att gca    3072
Ile Gln Ile Met Thr Val Ser Thr Ser Ala Ala Pro Ala Glu Ile Ala
            1010            1015            1020

gtt tct ccc gaa tcc cag gaa atg ccc atg gga cgg aca atc ctc aaa    3120
Val Ser Pro Glu Ser Gln Glu Met Pro Met Gly Arg Thr Ile Leu Lys
        1025            1030            1035

gtc acc cca gaa aaa cag act gtt cca act cca gta cgg aaa tac aac    3168
Val Thr Pro Glu Lys Gln Thr Val Pro Thr Pro Val Arg Lys Tyr Asn
    1040            1045            1050

tcc aat gcc aat atc ata acc aca gag gac aat aaa att cac att cac    3216
Ser Asn Ala Asn Ile Ile Thr Thr Glu Asp Asn Lys Ile His Ile His
1055            1060            1065            1070

tta ggg tct cag ttt aaa cgg tcc cct ggg act tca ggt gaa gga gtc    3264
Leu Gly Ser Gln Phe Lys Arg Ser Pro Gly Thr Ser Gly Glu Gly Val
            1075            1080            1085

agt cca gtt att act gtc cga cca gta aac gtg aca gcc gaa aag gag    3312
Ser Pro Val Ile Thr Val Arg Pro Val Asn Val Thr Ala Glu Lys Glu
        1090            1095            1100

gtt tcc acc ggc act gtc ctt cgc tct ccc agg aat cac ctc tcc tca    3360
Val Ser Thr Gly Thr Val Leu Arg Ser Pro Arg Asn His Leu Ser Ser
        1105            1110            1115

cgg cct ggt gca agc aaa gtg acg agc act atc acc ata aca ccg gtc    3408
Arg Pro Gly Ala Ser Lys Val Thr Ser Thr Ile Thr Ile Thr Pro Val
    1120            1125            1130
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aca acg tca tct gct cga gga acc cag tca gtg tca gga caa gac ggg    3456
Thr Thr Ser Ser Ala Arg Gly Thr Gln Ser Val Ser Gly Gln Asp Gly
1135            1140            1145            1150

tca tcc cag cgg cct aca ccc acc cgc att cct atg tca aaa ggt atg    3504
Ser Ser Gln Arg Pro Thr Pro Thr Arg Ile Pro Met Ser Lys Gly Met
            1155            1160            1165

aaa gca gga aag cca gta gtg gca gcc cca gga gca gga aat ctg acc    3552
Lys Ala Gly Lys Pro Val Val Ala Ala Pro Gly Ala Gly Asn Leu Thr
            1170            1175            1180

aaa ttc gag cct cga gct gag act cag tct atg aaa ata gag ctg aag    3600
Lys Phe Glu Pro Arg Ala Glu Thr Gln Ser Met Lys Ile Glu Leu Lys
        1185            1190            1195

aaa tct gca gcc agc agc acc acc tct ctc gga ggg ggg aag ggc        3645
Lys Ser Ala Ala Ser Ser Thr Thr Ser Leu Gly Gly Gly Lys Gly
    1200            1205            1210

tgagggcagt ggctaagggg gtatgttgtg cagatgctac tgctgccgtg aaagtgaacc 3705

ttcatctgtt tgtgccagtt ctttacatgt actaatttaa gttttaaata ttgtgtttat 3765

aaaataacca actaataacc atttgtcttt cccattttgt gcatttgttt tgatgctggg 3825

gaacaaaatt agcaaaacta ttgcttgctg cctagaagcc agggcgtggt ttctagttcc 3885

agttttgctt ctagcaagtg gacccatcaa tagacccatc tgagcctgtt tcctcatcag 3945

ttagatgtgg ggactcaatc acacgctctt caagtccggc tcccatattt cctaattgca 4005

agccaaattt aatgtacctt gttccacaat aattttttat taaaaaaatc ctattacaaa 4065

ataagacata ctttaactat tgtcatttgc ctctttcaca tcatgaattt gctttatgtg 4125

ctggaaaaaa catcacatag ctatcacagg gcctggacct ctaaaatttt gcaaaaacaa 4185

aaggttctaa gatgatttca ggaaataatg tgaacatgta ataaaatgga aatgaaatat 4245

gg                                                                 4247
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<210> 6

<211> 1213
<212> PRT
<213> Homo sapiens

<400> 6
Met Arg Ser Arg Asn Gln Gly Gly Glu Ser Ala Ser Asp Gly His Ile
1   5   10   15

Ser Cys Pro Lys Pro Ser Ile Ile Gly Asn Ala Gly Glu Lys Ser Leu
            20   25   30

Ser Glu Asp Ala Lys Lys Lys Lys Ser Asn Arg Lys Glu Asp Asp
        35   40   45

Val Met Ala Ser Gly Thr Val Lys Arg His Leu Lys Thr Ser Gly Glu
        50   55   60

Cys Glu Arg Lys Thr Lys Lys Ser Leu Glu Leu Ser Lys Glu Asp Leu
65   70   75   80

Ile Gln Leu Leu Ser Ile Met Glu Gly Glu Leu Gln Ala Arg Glu Asp
                85   90   95

Val Ile His Met Leu Lys Thr Glu Lys Thr Lys Pro Glu Val Leu Glu
            100   105   110

Ala His Tyr Gly Ser Ala Glu Pro Glu Lys Val Leu Arg Val Leu His
        115   120   125

Arg Asp Ala Ile Leu Ala Gln Glu Lys Ser Ile Gly Glu Asp Val Tyr
    130   135   140

Glu Lys Pro Ile Ser Glu Leu Asp Arg Leu Glu Glu Lys Gln Lys Glu
145   150   155   160

Thr Tyr Arg Arg Met Leu Glu Gln Leu Leu Leu Ala Glu Lys Cys His
                165   170   175

Arg Arg Thr Val Tyr Glu Leu Glu Asn Glu Lys His Lys His Thr Asp
            180   185   190

Tyr Met Asn Lys Ser Asp Asp Phe Thr Asn Leu Leu Glu Gln Glu Arg
            195   200   205

Glu Arg Leu Lys Lys Leu Leu Glu Gln Glu Lys Ala Tyr Gln Ala Arg
   210   215   220

Lys Glu Lys Glu Asn Ala Lys Arg Leu Asn Lys Leu Arg Asp Glu Leu
225   230   235   240

Val Lys Leu Lys Ser Phe Ala Leu Met Leu Val Asp Glu Arg Gln Met
           245   250   255

His Ile Glu Gln Leu Gly Leu Gln Ser Gln Lys Val Gln Asp Leu Thr
       260   265   270

Gln Lys Leu Arg Glu Glu Glu Glu Lys Leu Lys Ala Ile Thr Ser Lys
      275   280   285

Ser Lys Glu Asp Arg Gln Lys Leu Leu Lys Leu Glu Val Asp Phe Glu
   290   295   300

His Lys Ala Ser Arg Phe Ser Gln Glu His Glu Glu Met Asn Ala Lys
305   310   315   320

Leu Ala Asn Gln Glu Ser His Asn Arg Gln Leu Arg Leu Lys Leu Val
          325   330   335

Gly Leu Thr Gln Arg Ile Glu Glu Leu Glu Glu Thr Asn Lys Asn Leu
       340   345   350

Gln Lys Ala Glu Glu Glu Leu Gln Glu Leu Arg Asp Lys Ile Ala Lys
      355   360   365

Gly Glu Cys Gly Asn Ser Ser Leu Met Ala Glu Val Glu Asn Leu Arg
   370   375   380

Lys Arg Val Leu Glu Met Glu Gly Lys Asp Glu Glu Ile Thr Lys Thr
385   390   395   400

Glu Ser Gln Cys Arg Glu Leu Arg Lys Lys Leu Gln Glu Glu Glu His
          405   410   415

His Ser Lys Glu Leu Arg Leu Glu Val Glu Lys Leu Gln Lys Arg Met
       420   425   430

Ser Glu Leu Glu Lys Leu Glu Glu Ala Phe Ser Lys Ser Lys Ser Glu
      435   440   445

Cys Thr Gln Leu His Leu Asn Leu Glu Lys Glu Lys Asn Leu Thr Lys
    450   455   460

Asp Leu Leu Asn Glu Leu Glu Val Val Lys Ser Arg Val Lys Glu Leu
465   470   475   480

Glu Cys Ser Glu Ser Arg Leu Glu Lys Ala Glu Leu Ser Leu Lys Asp
                485   490   495

Asp Leu Thr Lys Leu Lys Ser Phe Thr Val Met Leu Val Asp Glu Arg
            500   505   510

Lys Asn Met Met Glu Lys Ile Lys Gln Glu Glu Arg Lys Val Asp Gly
            515   520   525

Leu Asn Lys Asn Phe Lys Val Glu Gln Gly Lys Val Met Asp Val Thr
    530   535   540

Glu Lys Leu Ile Glu Glu Ser Lys Lys Leu Leu Lys Leu Lys Ser Glu
545   550   555   560

Met Glu Glu Lys Val Tyr Asn Leu Thr Arg Glu Arg Asp Glu Leu Ile
                565   570   575

Gly Lys Leu Lys Ser Glu Glu Glu Lys Ser Ser Glu Leu Ser Cys Ser
            580   585   590

Val Asp Leu Leu Lys Lys Arg Leu Asp Gly Ile Glu Glu Val Glu Arg
            595   600   605

Glu Ile Thr Arg Gly Arg Ser Arg Lys Gly Ser Glu Leu Thr Cys Pro
    610   615   620

Glu Asp Asn Lys Ile Lys Glu Leu Thr Leu Glu Ile Glu Arg Leu Lys
625   630   635   640

Lys Arg Leu Gln Gln Leu Glu Val Val Glu Gly Asp Leu Met Lys Thr
                645   650   655

Glu Asp Glu Tyr Asp Gln Leu Glu Gln Lys Phe Arg Thr Glu Gln Asp
                660   665   670

Lys Ala Asn Phe Leu Ser Gln Gln Leu Glu Glu Ile Lys His Gln Ile

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                675                    680                    685

Ala Lys Asn Lys Ala Ile Glu Lys Gly Glu Val Val Ser Gln Glu Ala
    690                 695                 700

Glu Leu Arg His Arg Phe Arg Leu Glu Glu Ala Lys Ser Arg Asp Leu
705                 710                 715                 720

Lys Ala Glu Val Gln Ala Leu Lys Glu Lys Ile His Glu Leu Met Asn
                725                 730                 735

Lys Glu Asp Gln Leu Ser Gln Leu Gln Val Asp Tyr Ser Val Leu Gln
            740                 745                 750

Gln Arg Phe Met Glu Glu Glu Asn Lys Asn Lys Asn Met Gly Gln Glu
        755                 760                 765

Val Leu Asn Leu Thr Lys Glu Leu Glu Leu Ser Lys Arg Tyr Ser Arg
    770                 775                 780

Ala Leu Arg Pro Ser Val Asn Gly Arg Arg Met Val Asp Val Pro Val
785                 790                 795                 800

Thr Ser Thr Gly Val Gln Thr Asp Ala Val Ser Gly Glu Ala Ala Glu
            805                 810                 815

Glu Glu Thr Pro Ala Val Phe Ile Arg Lys Ser Phe Gln Glu Glu Asn
        820                 825                 830

His Ile Met Ser Asn Leu Arg Gln Val Gly Leu Lys Lys Pro Val Glu
        835                 840                 845

Arg Ser Ser Val Leu Asp Arg Tyr Pro Pro Ala Ala Asn Glu Leu Thr
    850                 855                 860

Met Arg Lys Ser Trp Ile Pro Trp Met Arg Lys Arg Glu Asn Gly Pro
865                 870                 875                 880

Ser Ile Thr Gln Glu Lys Gly Pro Arg Thr Asn Ser Ser Pro Gly His
                885                 890                 895

Pro Gly Glu Val Val Leu Ser Pro Lys Gln Gly Gln Pro Leu His Ile
            900                 905                 910
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Arg Val Thr Pro Asp His Glu Asn Ser Thr Ala Thr Leu Glu Ile Thr
    915             920             925

Ser Pro Thr Ser Glu Glu Phe Phe Ser Ser Thr Thr Val Ile Pro Thr
    930             935             940

Leu Gly Asn Gln Lys Pro Arg Ile Thr Ile Ile Pro Ser Pro Asn Val
945             950             955             960

Met Pro Gln Lys Gln Lys Ser Gly Asp Thr Thr Leu Gly Pro Glu Arg
            965             970             975

Ala Met Ser Pro Val Thr Ile Thr Thr Phe Ser Arg Glu Lys Thr Pro
        980             985             990

Glu Ser Gly Arg Gly Ala Phe Ala Asp Arg Pro Thr Ser Pro Ile Gln
    995             1000            1005

Ile Met Thr Val Ser Thr Ser Ala Ala Pro Ala Glu Ile Ala Val Ser
    1010            1015            1020

Pro Glu Ser Gln Glu Met Pro Met Gly Arg Thr Ile Leu Lys Val Thr
1025            1030            1035            1040

Pro Glu Lys Gln Thr Val Pro Thr Pro Val Arg Lys Tyr Asn Ser Asn
            1045            1050            1055

Ala Asn Ile Ile Thr Thr Glu Asp Asn Lys Ile His Ile His Leu Gly
        1060            1065            1070

Ser Gln Phe Lys Arg Ser Pro Gly Thr Ser Gly Glu Gly Val Ser Pro
        1075            1080            1085

Val Ile Thr Val Arg Pro Val Asn Val Thr Ala Glu Lys Glu Val Ser
    1090            1095            1100

Thr Gly Thr Val Leu Arg Ser Pro Arg Asn His Leu Ser Ser Arg Pro
1105            1110            1115            1120

Gly Ala Ser Lys Val Thr Ser Thr Ile Thr Ile Thr Pro Val Thr Thr
            1125            1130            1135

Ser Ser Ala Arg Gly Thr Gln Ser Val Ser Gly Gln Asp Gly Ser Ser
        1140            1145            1150
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Gln Arg Pro Thr Pro Thr Arg Ile Pro Met Ser Lys Gly Met Lys Ala
        1155                1160                1165

Gly Lys Pro Val Val Ala Ala Pro Gly Ala Gly Asn Leu Thr Lys Phe
    1170                1175                1180

Glu Pro Arg Ala Glu Thr Gln Ser Met Lys Ile Glu Leu Lys Lys Ser
1185                1190                1195                1200

Ala Ala Ser Ser Thr Thr Ser Leu Gly Gly Gly Lys Gly
            1205                1210
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